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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/940,686      09/30/1997      THOMAS L. RITZDORF      5188

25096      7590      12/17/2003

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EXAMINER

LEADER, WILLIAM T

ART UNIT      PAPER NUMBER

1742

28

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

08/940,686

Applicant(s)

RITZDORF, THOMAS L.

Examiner

William T. Leader

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10,13,14,16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10, 13, 14, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 6, 2003, has been entered. Claims 1-7, 9, 10, 13, 14, 16 and 17 are pending.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. It is not possible to determine what the actual structure of the recited semiconductor workpiece holder is. By reciting that the composition of the material plated onto the contact face is related to the material which is to be plated onto the

semiconductor during use of the holder, the structure is based on a process step which occurs at some time in the future.

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-7, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee et al (5,078,852) in view of the Lowenheim text

*Electroplating* and Poris (5,723,028) for the reasons given in the previous office action and in view of the following comments.

8. Claims 9, 10, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee et al (5,078,852) in view of the Lowenheim text *Electroplating* and Poris (5,723,028) and further in view of Mayer et al (4,118,301) for the reasons given in the previous office action and in view of the following comments.

### ***Response to Amendment***

Applicant's Remarks have been carefully considered but are not deemed to be persuasive.

Applicant argues that the present claims meet the threshold of 35 U.S.C. 112, second paragraph. This argument is not convincing. Applicant is basing the structure of the apparatus recited in claims 1-7 on the intended use of the apparatus. The apparatus is capable of being used in the plating of a variety of metals. It is not known which metal the apparatus may ultimately be used to plate.

With respect to the rejection of claim 1-4 under 35 U.S.C. 103, applicant argues that a prima facie basis for the rejection of the claims has not been made and argues that the only teaching that suggests the combination of references is

applicant's own disclosure. By combining the references as proposed, the desirable properties such as improved electrical contact and avoidance of poisoning the semiconductor workpiece would have been obtained as taught by Lowenheim.

Applicant argues that Yee et al teach that the cam should be formed of an inert material. In the environment disclosed, gold would have been expected to be inert.

With respect to claims 5-7, applicant argues that the deficiencies noted with respect to claims 1-4 apply. For the reasons that applicant's arguments were not considered to be persuasive for claims 1-4, they are not considered to be persuasive with respect to claims 5-7.

With respect to claim 9, applicant argues that the rejection contradicts the portions of Lowenheim cited in the rejection of claims 1-7. This argument is not convincing. Lowenheim provides the motivation for the use of a copper contact face. One of ordinary skill would recognize that the use of the same metal on the contact region of the electrode finger that is electroplated onto the semiconductor wafer would avoid the poisoning problem mentioned by Lowenheim since any metal transferred from the electrode finger to the semiconductor would be the same as that intentionally deposited. The rejection does not contradict Lowenheim.

With respect to claims 13, 14, 16 and 17 applicant argues that the combination of references has the same basic defects as those discussed in regard to claim 9. For the reasons that applicant's arguments were not considered to be

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persuasive for claims 9 and 10, they are not considered to be persuasive with respect to claims 5-7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William T. Leader whose telephone number is 703-308-2530. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

WL

William Leader  
December 12, 2003

ROY KING  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700